

CLAIMS

1. A tandem pressing apparatus, comprising:

a tandem pressing line constructed by plural tandem presses disposed side by side, each of the tandem presses including a bed, plural uprights studded on the bed, and a slide supported on the uprights to be ascended or descended;

a work conveying apparatus including a main member and an arm portion, the main member being provided at a portion located inside the uprights of the adjacent two tandem presses constructing the tandem pressing line and not interfering with the slide, the arm member being held on the main member to transfer the work having been pressed by the upstream tandem press to the downstream tandem press.

2. A tandem pressing apparatus according to claim 1, wherein the main member is disposed in a space formed between the upright of the upstream tandem press and the upright of the downstream tandem press adjacent to the upstream tandem press, and including a space existed inside the upstream upright and the downstream upright.

3. A tandem pressing apparatus according to claim 2, wherein the main member is positioned outside a contour of the slide, in the plane view.

4. A tandem pressing apparatus according to claim 3, wherein the main member is fixed to the upright located at one side relative to the conveying direction of the work.

5. A tandem pressing apparatus according to claim 1, wherein

the main member is slidably held by a guiding member provided inside the upright of the upstream tandem press and the upright of the downstream tandem press.

6. A tandem pressing apparatus according to claim 5, wherein the main member, moved to the upstream tandem press or the downstream tandem press, is positioned outside a contour of the slide.

7. A tandem pressing apparatus according to claim 6, wherein the guiding member is fixed to the uprights located at both sides of the slide relative to the conveying direction of the work.

8. A tandem pressing apparatus according to claim 2 or 5, wherein the arm member is a multi-joint arm including two or more joints.

9. A tandem pressing apparatus according to claim 2, wherein the main member is fixed to at an intermediate portion of the upright in the height direction, and the arm member is extended laterally from the main member.

10. A tandem pressing apparatus according to claim 5, wherein the guiding member is fixed to at an intermediate portion of the upright in the height direction, and the arm member is extended downwardly from the main member.

11. A tandem pressing apparatus according to claim 2 or 5, wherein said work conveying apparatus is a conveying robot controlled by a CPU.